THE MINISTER OF COAL (SHRI SHIBU SOREN): (a) Yes, Sir.

(b) Government of India sanctioned the Mine-II Expansion project of 4.50 MTPA capacity (cost—Rs. 2,161.28 Crore with foreign exchange component of Euro 112.71 Million) and the linked Thermal Power Station-II Expansion project of 500 MW capacity (cost-Rs. 2,030.78 Crore with foreign exchange component of US $ 119.084 Million) on 18.10.2004 for implementation at Neyveli in Tamilnadu.

As per the sanction letter, the mine will commence lignite production on 53rd month from GOI sanction i.e. in February, 2009 and will attain full production on 57th month i.e. in June, 2009. The commissioning schedule of Units I and II of the linked Thermal Power Station-II expansion project will be February, 2009 and June, 2009 respectively.

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## WRITTEN ANSWERS TO UNSTARRED QUESTIONS

### Long term energy security

2711. SHRI BALAVANT *ALIAS* BAL APTE: Will the PRIME MINISTER be pleased to state:

(a) whether the Government have recently formulated a nuclear power programme to provide long-term energy security to the country based on indigenous nuclear fuel resources;

(b) if so, the details thereof; and

(c) the stage at which it stands at present?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN): (a) A three-stage nuclear power programme to utilize large thorium reserves in the country for electricity generation has been envisaged since the inception of nuclear power-programme in the country.

(b) The three stages of the programme are:

- Pressurised Heavy Reactors (PHWR) in the first stage, based on natural uranium available in the country.
- Fast Breeder Reactors (FBR) utilising plutonium-uranium fuel cycle, in the second stage.
- Reactors for utilisation of our vast resources of thorium, in the third stage.

The three stages have important fuel cycle linkages and have to be gone through sequentially.

(c) At present there are 15(13 PHWRs and 2 Boiling Water Reactors) power reactor in operation with a total capacity of 3360 MWe. In addition, five Pressurised Heavy Water Reactors (PHWRs) and two Light Water Reactors (LWRs) are under construction.

A beginning to the second stage programme has been made with the start of construction of 500 MWe Prototype Fast Breeder Reactor (PFBR) at Kalpakkam, Tamil Nadu.

The third stage of the programme will be launched after sufficient base capacity of the second stage FBRs are put in operation. A technology demonstration project - Advanced Heavy Water Reactor (AHWR) is planned for construction to move forward on technologies for Thorium utilisation and innovative reactor systems. A small research reactor Kalpakkam Mini Reactor (KAMINI) of third stage is already in operation.

**Reserves of Uranium of Orissa**

†2712. SHRI YASHWANT SINHA:
SHRI MANGANI LAL MANDAL:

Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that huge reserve of Uranium has been discovered in the Vemlagarh and Sayamba, region of the Sundargarh district of Orissa;

(b) whether it is also a fact that a team of scientists is making efforts to discover and calculate the availability of the huge potential of Uranium reserve; and

(c) if so, the details thereof ?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITVIRAJ CHAVAN): (a) to (c) Atomic Minerals Directorate for Exploration and Research (AMD) Hyderabad, a constituent Unit of the Department of Atomic Energy has located a few occurrences of uranium near Sayamba and Taladih in Sundergarh District, Orissa where detailed exploration programme is being undertaken. The lead time after locating uranium anomalies to establish a uranium deposit in an area is generally 8-10 years depending on the complexity/nature of mineralization. The potential of these areas would be known only after completion of exloration activities.

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†Original notice of the question was received in Hindi.